

ENCKE'S COMET.

CAMBRIDGE, U.S.

(Professor W. C. Bond.)

1848.	Cambridge	R.A. Jan. 1, 1848.	Decl. Jan. 1, 1848.	No. of Obs.	Star of Comp.
	M.T. h m s				
Aug. 27	14 1 44	3 19 28	+ 31 57 1	1	
29	12 50 53	23 31.2	32 36 29	13	<i>a</i>
30	12 57 36	25 46.2	32 57 47	11	<i>b</i>
31	12 40 1	27 58.9	33 19 3	10	<i>c</i>
Sept. 5	15 56 49	3 40 36.2	35 17 13	6	<i>d</i>
26	11 26 24	5 7 49.4	46 23 42	10	<i>e</i>
Oct. 8	16 35 57	7 26 35.9	53 3 36	6	<i>f</i>
27	17 30 39	12 19 51.7	25 5 29	8	<i>g</i>
Nov. 3	17 33 38	13 7 48.4	11 6 18	6	<i>h</i>
5	17 29 34	18 14.7	+ 7 43 58	6	<i>i</i>
13	17 56 8	13 53 52.5	— 3 34 57	10	<i>k</i>
20	18 17 33	14 25 18.8	11 38 55	4	<i>l</i>
25	18 5 20	14 52 59.4	— 16 44 49	4	<i>m</i>
Nov. 21	18 17 02	Comet precedes Mercury 7 <sup>m</sup> 29 <sup>s</sup> 35 by two comps.			
	18 5 36	— North of —	5' 44'' 3 by one ,,		

“All the above positions have been determined with the *Micrometer* of the great equatoreal, with the exception of those on the 27th of August and the 25th of November, on which occasions the declination and hour-circles were used. The comet's places are corrected for refraction, but not for parallax. The places of the stars which follow are mostly from our own determinations.

Mean Places of the Stars of Comparison, January 1, 1848.

Star	R.A.	Decl.	Mag.
	h m s		
<i>a</i>	3 23 40.54	+ 32 30 54.3	10
<i>b</i>	3 26 5.22	33 1 38.3	11
<i>c</i>	3 29 19.00	33 21 23.7	9
<i>d</i>	3 40 41.87	35 15 19.2	9
<i>e</i>	5 8 14.79	46 27 33.2	9
<i>f</i>	7 27 56.10	53 0 51.6	7
<i>g</i>	12 19 58.13	25 4 7.1	8
<i>h</i>	13 8 9.51	11 3 15.7	9 B. Z. 232
<i>i</i>	13 19 55.74	+ 7 42 4.0	9
<i>k</i>	13 53 48.30	— 3 34 45.6	8
<i>l</i>	14 28 55.07	11 39 20.5	7 B.A.C. 4828
<i>m</i>	14 42 28.75	— 15 24 24.0	3 — 4895

“August 27. The comet is faint and without concentration; its light is coarsely granulated, so that, were it not for its motion, it might be mistaken for a group of very small stars.

" September 26. A faint brush of light extends from the comet *towards* the sun.

" October 6. The comet is just visible to the naked eye. The brighter part is very eccentrically situated with reference to the general mass. A fan-shaped brush of light is very evident on the side *towards* the sun. There is no other appendage which can be called a tail.

" October 27. A faint ray of light is now seen directed from the sun.

" November 3. The comet shews a tail of one or two degrees, directed *from* the sun; with the same appearance on the opposite side as in October.

" November 5. The star of comparison is double, Dist. = 10"; that north pre-  
ceding is used.

" November 21. The comparisons with *Mercury* have been corrected for re-  
fraction and for the planets' motion in the intervals of transit.

" November 25. At the first observation the altitude of the comet was 4°. The  
star was observed at nearly the same altitudes with the comet, so as to diminish  
the effect of errors in the refraction tables.

" The place given is probably accurate to within 0.5 in right ascension, and 5"  
or 10" in declination."

### PETERSEN'S SECOND COMET.

CAMBRIDGE, U. S.      Equatoreal.      (Professor W. C. Bond.)

	R.A.			Decl.			No. of Obs.	Star.
	h	m	s	°	'	"		
1848.								
Nov. 25	6	56	41	20	35	11.2	2	<i>a</i>
27	6	58	34	20	43	45.8	6	<i>b</i>
28	6	55	53	20	47	58.3	3	<i>a</i>
29	6	55	16	20	52	10.5	1	<i>a</i>
30	8	20	36	20	56	35.6	3	<i>c</i>
Dec. 18	7	18	45	22	4	15.3	3	<i>d</i>
19	7	34	9	22	7	39.0	4	<i>e</i>
1849.								
Jan. 22	6	42	22	23	42	13.2	2	<i>f</i>

Corrected for Refraction and referred to the Mean Equinox, Jan. 1, 1848.

### Mean Places of Stars of Comparison for 1848.

	R.A.			Decl.			
	h	m	s	°	'	"	
<i>a</i>	20	40	3.75	+ 33	24	13.8	ε Cygni
<i>b</i>	20	43	12.06	35	0	15.5	Lalande, 40277
<i>c</i>	20	59	22.45	30	57	32.7	B. Z. 306
<i>d</i>	22	4	19.51	6	8	58.3	Weisse, xxii, 78
<i>e</i>	22	6	25.42	+ 5	1	41.0	— —, 124
<i>f</i>	23	36	34.00	— 27	5	15.9	Lalande, 46511

" The places on the 25th, 28th, and 29th of Nov. are from instrumental com-  
parisons; the remainder are from micrometric differences, which were susceptible  
of great nicety, as the centre of the comet was indicated by a finely marked  
nucleus. On Nov. 30th, the nucleus passed within one second of arc of a star of  
the 12th mag., forming a close double star, but the contact was not complete.  
At the time of nearest approach the comet could be *seen to move*."